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Docket No.: M4065.0067/P067  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Warren M. Farnworth

Application No.: 09/118,080

Art Unit: 2827

Filed: July 17, 1998 (RCE)

Examiner: A. Chambliss

For: LEAD OVER CHIP SEMICONDUCTOR  
DEVICES WITH A BALL GRID ARRAY

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**REQUEST FOR RECONSIDERATION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Responsive to the Office Action dated February 13, 2004, please reconsider the above-referenced application in light of the following remarks. Claims 1-7 and 10-33 are pending in the application. Claims 19-30 are withdrawn from further consideration. Claims 19-30 are not cancelled.

Claims 1, 2, 4-7, 10-14 and 16-18 are rejected under 35 U.S.C. § 103 as being unpatentable over Heo in view of Master Bond Polymer System EP31. Reconsideration is respectfully requested. As noted previously, claim 1 recites a "low temperature curing"

adhesive material. Heo fails to disclose the recited adhesive (Office Action, page 3, lines 6-8) and, as explained in the prior response, there is no motivation for substituting the Master Bond adhesive for the Heo adhesive 30. The Office Action provides no explanation to the contrary.

The Office Action contends that the "low temperature curing" aspect of the adhesive material of claim 1 can be ignored. In response, Applicant respectfully submits that the "low temperature curing" limitation is like the structural limitations listed in M.P.E.P. § 2113, second paragraph ("intermixed," "ground in place," "etched," etc.). There are structural differences between devices that have the recited "low temperature curing" adhesive material and those that do not. Therefore, the low temperature curing adhesive material limitation of claim 1 should not be ignored.

Claims 2-7 depend from claim 1 and should be allowable along with claim 1 and for other reasons. Claims 10-12 each recite adhesive material that "cures to about ninety percent of its maximum strength within twenty four to thirty six hours at room temperature." Claims 13-18 each recite adhesive material that is "capable of curing to about ninety percent of its maximum strength within two to three hours without exceeding one hundred fifty degrees Fahrenheit so as to avoid misalignment." Claims 10-18 should be allowable for reasons similar to those given in connection with claim 1, and there are other reasons why the claims should be allowable.

Claims 31-33 are rejected under 35 U.S.C. § 103 as being unpatentable over Heo in view of Akagawa. Reconsideration is respectfully requested. Claims 31-33 each recite an anisotropically conductive adhesive material. The material is located between a

dielectric layer and a chip. Heo fails to disclose or suggest the recited material. The Office Action contends it would have been obvious to substitute an anisotropically conductive adhesive material for the Heo adhesive 30. The motivation for such substitution, according to the Office Action, would have been to provide a "bonding material" between the chip 11 and film 21. Please note, however, that the Heo device already has a "bonding material" (the adhesive 30) between the chip 11 and film 21. Applicant respectfully submits that the rejection of claims 31-33 amounts to nothing more than an argument that it would have been obvious to try any and all materials that are "bonding materials" as a possible substitute for the Heo adhesive, which is not a proper basis for a § 103 rejection.

The Office Action also makes an argument, on page 9, with respect to providing an "additional" source of electrical connection for the "semiconductor device." This argument is not understood. It is not understood which "semiconductor device" the Office Action is referring to, or why the adhesive would be considered an "additional" source of electrical connection.

Dated: March 29, 2004

Respectfully submitted,

By 

Mark J. Thronson

Registration No.: 33,082

DICKSTEIN SHAPIRO MORIN &  
OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 775-4742

Attorneys for Applicant